# ADVANCE INFORMATION
# NAP-201 Ethanol Sensor

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## General Description

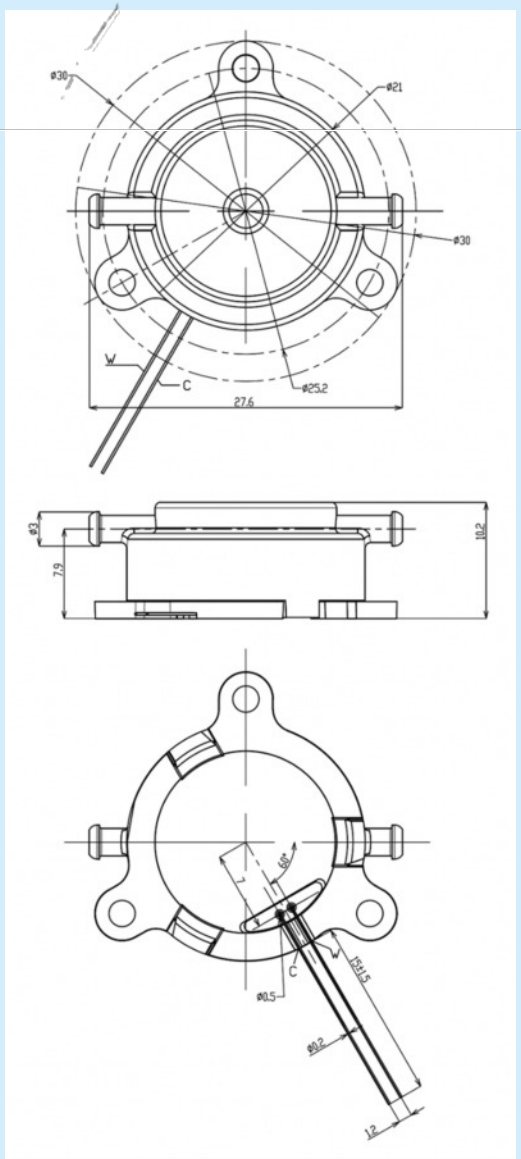
The NAP-201 is a new electrochemical gas sensor for the measurement of Ethanol ($CH_3CH_2OH$) in the range 0 - 0.4 mg/l, in a variety of breath testing instrumentation.

The sensor exhibits excellent linearity, accuracy and repeatability, and is both durable and highly selective to Ethanol, with the minimum of interference from other gases present.

## Specifications:

| | |
|---|---|
| Detectable Gas | Ethanol ($CH_3CH_2OH$) |
| Detection range | 0-0.4 mg/l |
| Maximum overload | 1.0 mg/l |
| Repeatability | <+/- 0.03 mg/l |
| Response time to reading | < 5 seconds |
| Temperature range: | -0°C to +50°C |
| Humidity range | 10-90% RH |
| Recommended sample volume | 0.3 - 0.5 $cm^3$ |
| Recommended sample time | 1 second |
| Recommended load resistor | 10Ω |
| Recommended storage time | 6 months |
| Cap colour | Black |
| Material of construction | m-PPE |
| Wire | Pt |

## Dimensions:



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**Contact Information:**

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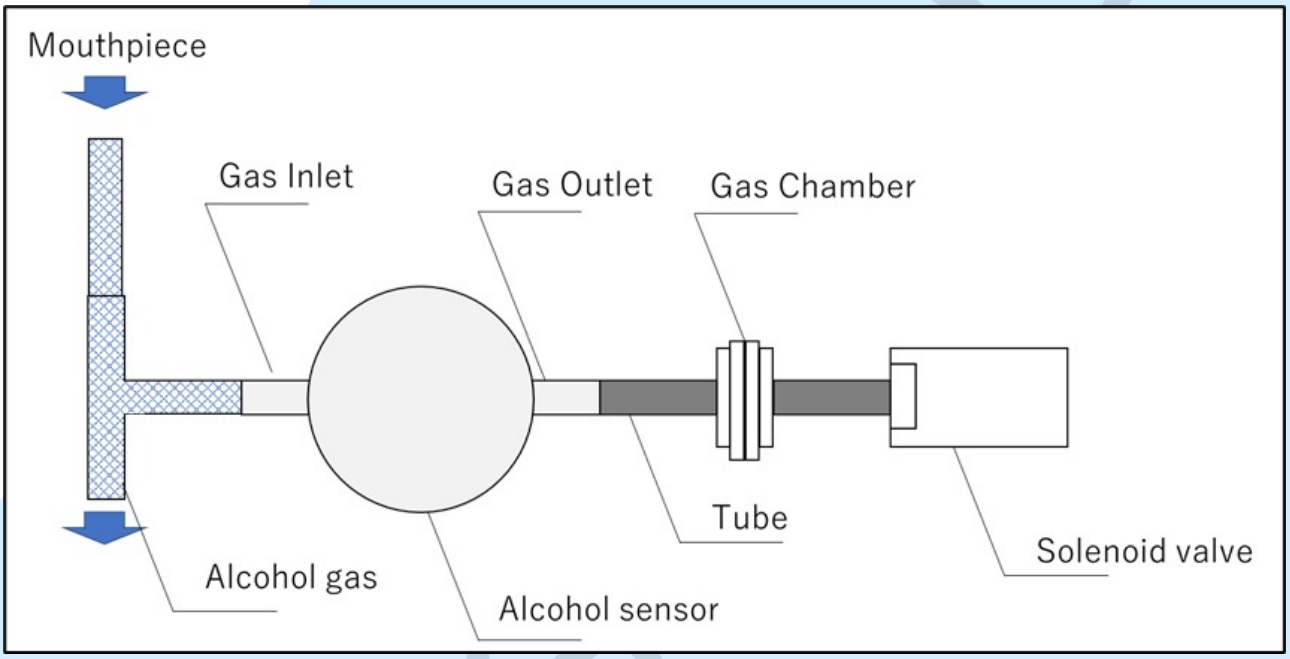
## Schematic Diagram




In order to let the alcohol component flowing through the mouthpiece flow into the sensor, connect a solenoid controlled pump as shown in the figure above. The recommended suction time is 1 second and the suction volume is 0.3-0.5 $cm^3$.

Figure 2 below shows the typical waveform when the sensor is exposed to an ethanol concentration of 0.1 mg/l. The sensor signal reaches its peak in approx 3 seconds after exposure, then quickly recovers to zero.

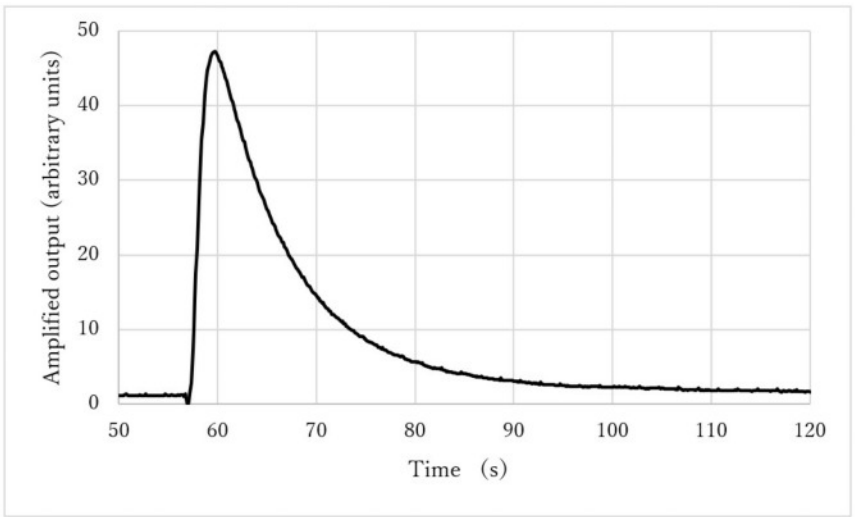



Fig. 2 Waveform When Exposed to 0.1 mg/L of Ethanol

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